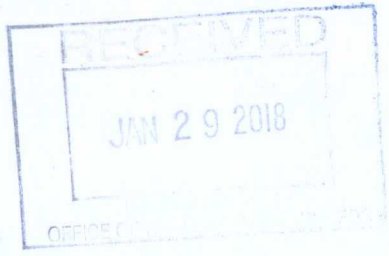


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EPA General Permit WAG130000 - Annual Report



Annual Report of Operations
for Year 2018

To comply with NPDES General Permit No. WAG130000 for Federal
Aquaculture Facilities and Aquaculture Facilities Located in Indian
Country within the Boundaries of the State of Washington

NPDES # for your Facility:

WAG130003

Facility & Owner Information

Facility Name:

Little White Salmon National Fish Hatchery

Operator Name (Permittee):

Little White Salmon National Fish Hatchery

Address:

56961 SR 14
Cook, WA 98605

Email:

Bob_Turik@fws.gov

Phone:

509-538-2755

Owner Name (if different from operator):

Email:

Phone:

Best Management Practices (BMP) Plan

Has the BMP Plan been reviewed this year? ☒ Yes ☐ No

Does the BMP Plan fulfill the requirements of the General Permit? ☒ Yes ☐ No

Summarize any changes to the BMP Plan since the last annual report. Attach additional pages if necessary.

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Operations and Production

Total harvestable weight produced in the past calendar year in pounds (lbs): 139,938*

Pounds of food fed to fish during the maximum month:
18,452

List the species grown or held at your facility and the annual production of each in gross harvestable weight. If fish were released rather than harvested, list the weight at time of release.

Species	Fish Produced	Receiving Water(s) to which Fish were Released	Month Released/Spawned
Sp. Chinook Lot 55	52,967	Little White Salmon River	April release
Sp. Chinook Lot 58	34,599	Currently onsite	Spawned '17
Fall Chinook Lot 59	2,917	Transferred to Prosser Hatchery	April transfer
Fall Chinook Lot 59	49,455	Little White Salmon River	July release

Fill in the table below with production numbers from the past year. List the **maximum** amount of fish on-site and the maximum amount of food fed **per month**.

Month	Total Fish (lbs)	Fish Feed (lbs)	Month	Total Fish (lbs)	Fish Feed (lbs)
January	37,413	1364	July	18,115	9010
February	46,202	4620	August	26,650	6600
March	59,756	10,120	September	30,787	4972
April	16,018	7348	October	34,509	2992
May	29,657	10,334	November	32,786	1980
June	54,113	18,452	December	34,599	1540

Additional Comments: Lot 55 was onsite in 2017. Per NPDES instructions, the "harvestable weight" includes weight the lot gained in 2017 also because the fish were released on-site.

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Solid Waste Disposal

Describe the solid waste disposed of during the calendar year (including fish mortalities).

Type of Solid Disposed	Date Disposed	Location Disposed
fish fecal matter	Jan - Dec	earthen pits (onsite)
sediment/organic matter	Jan - Dec	earthen pits (onsite)
fish mortalities	Jan - Dec	earthen pits (onsite)
Additional Comments: Fecal matter/organics/sediment are flushed to settling basin. Mortalities buried daily.		

Fish Mortalities

Include a description and the dates of mass mortalities in the past year (more than 5% per week). Attach additional pages, if necessary. Include total mortalities from all causes.

Date	Cause of Deaths	Steps Taken to Correct Problem	Pounds of Fish
NA	NA	NA	NA
Additional Comments:			

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Noncompliance Summary

Include a description and the dates of noncompliance events (including spills), the reasons for the incidents, and the steps taken to correct the problems. Attach additional pages, if necessary.

NA

Inspections & Repairs for Production & Wastewater Treatment Systems

Date Inspected	Date Repaired	Description of System Inspected and/or Repaired

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Aquaculture Drugs and Chemicals

Please indicate whether you used each drug/chemical **during the past calendar year**.

Describe the use of each drug/chemical in more detail on the following pages.

Used in the past year?	Drug or Chemical
<input type="checkbox"/> Yes <input type="checkbox"/> No	Azithromycin
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Chloramine-T: <i>See additional reporting requirements on page 7</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Chlorine
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Draxxin
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Erythromycin - injectable
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Erythromycin - medicated feed
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Florfenicol (Aquaflor)
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Formalin - 37% formaldehyde: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Herbicide - describe:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hormone - describe:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydrogen Peroxide: <i>See additional reporting requirements on page 7</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Iodine: <i>See additional reporting requirements on page 7</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Oxytetracycline
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Potassium Permanganate: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Romet
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	SLICE (emamectin benzoate)
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sodium Chloride - salt
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Vibrio vaccine
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Other: MS-222 (tricaine methanesulfonate)
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Other: Virkon Aquatic and Sodium thiosulphate

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Draxxin		Generic Name: Tulathromycin	
Reason for use: Prevent pre-spawn mortality due to disease			
<input checked="" type="checkbox"/> Preventative/Prophylactic <input type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units): 140 grams	Total quantity of formulated product used in past year (specify units): 1	
Date(s) of treatment: July 11, 12, 13 One injection event/fish performed over 3 days			Total number of treatments in past year: 1
Maximum daily volume of treated water: NA	Treatment concentration (specify units): 10mg/kg body wght	Duration and frequency of treatment(s): 1 injection event per fish	
Method of application:	<input type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input checked="" type="checkbox"/> Other (describe): Injection	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input checked="" type="checkbox"/> Other (describe): Spawning building	
Where did water treated with this chemical go? (check all that apply):	<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input checked="" type="checkbox"/> Other (describe): NA	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

Brand Name: MS-222		Generic Name: Tricaine methanesulfonate	
Reason for use: Fish anesthetic			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment: 0.18 kg (max)	Total quantity of formulated product used in past year (specify units): 2.28 kg	
Date(s) of treatment: 7/11 to 9/11			Total number of treatments in past year: 14
Maximum daily volume of treated water: 2,040 Liters	Treatment concentration (specify units): 85 ppm	Duration and frequency of treatment(s): Solution used appx. 6 hours per day	
Method of application:	<input checked="" type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input checked="" type="checkbox"/> Other (describe): Spawning building	
Where did water treated with this chemical go? (check all that apply):	<input type="checkbox"/> Discharged w/o treatment <input checked="" type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input checked="" type="checkbox"/> Other (describe):	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Hasa Multi-Chlor		Generic Name: Chlorine (sodium hypochlorite)	
Reason for use: Disinfection			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units): 150 mls (max)	Total quantity of formulated product used in past year (specify units): 3.7 liters	
Date(s) of treatment: May, July, December			Total number of treatments in past year: 3
Maximum daily volume of treated water: NA	Treatment concentration (specify units): 1.6 ml/L of water	Duration and frequency of treatment(s): One time application per vessel	
Method of application:	<input type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input checked="" type="checkbox"/> Other (describe): wand sprayer	
Location in facility chemical was used (check all that apply):	<input checked="" type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input checked="" type="checkbox"/> Ponds (cement) <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe):	
Where did water treated with this chemical go? (check all that apply):	<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input checked="" type="checkbox"/> Other (describe): See note	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: Sodium thio applied around closed drain valves in dry vessels as a precaution. Chlorine dries and evaporates at site of application.			

Brand Name: Sodium thiosulphate		Generic Name: Sodium thiosulphate	
Reason for use: Chlorine and iodine neutralizer			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment: 7 grams (max)	Total quantity of formulated product used in past year (specify units): 185 grams	
Date(s) of treatment: May; July - December			Total number of treatments in past year: 59
Maximum daily volume of treated water: 625 Liters	Treatment concentration (specify units): 1.4g/L for Cl- 1.5 g/L for I	Duration and frequency of treatment(s): As needed	
Method of application:	<input checked="" type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input checked="" type="checkbox"/> Other (describe): In empty vessels	
Location in facility chemical was used (check all that apply):	<input checked="" type="checkbox"/> Raceways <input checked="" type="checkbox"/> Incubation building	<input checked="" type="checkbox"/> Ponds (cement) <input type="checkbox"/> Off-line settling basin <input checked="" type="checkbox"/> Other (describe): Spawning building	
Where did water treated with this chemical go? (check all that apply):	<input checked="" type="checkbox"/> Discharged w/o treatment <input checked="" type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input type="checkbox"/> Other (describe):	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Terramycin 200		Generic Name: Oxytetracycline dihydride	
Reason for use: Control for present disease			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units): 45 kg (averaged)	Total quantity of formulated product used in past year (specify units): 90 kg	
Date(s) of treatment: February and March			Total number of treatments in past year: 2
Maximum daily volume of treated water: NA	Treatment concentration (specify units): 3.75kg/ 45.4 kg body weight	Duration and frequency of treatment(s): 10 days of feed per treatment	
Method of application:		<input type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through <input checked="" type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):		<input checked="" type="checkbox"/> Raceways <input type="checkbox"/> Incubation building <input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe):	
Where did water treated with this chemical go? (check all that apply):		<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin <input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input type="checkbox"/> Other (describe): NA	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			
Brand Name: Parasite -S		Generic Name: Formalin (37% formaldehyde)	
Reason for use: Fungus prevention			
<input checked="" type="checkbox"/> Preventative/Prophylactic <input type="checkbox"/> As-needed	Total quantity of formulated product per treatment: 138.8 liters (max)	Total quantity of formulated product used in past year (specify units): 3,460 liters	
Date(s) of treatment: January; July - December			Total number of treatments in past year: 77
Maximum daily volume of treated water: 831,720 liters	Treatment concentration (specify units): 167 ppm and 1,667 ppm	Duration and frequency of treatment(s): 3x/week for one hour 3x/week for 15 minutes	
Method of application:		<input type="checkbox"/> Static Bath <input checked="" type="checkbox"/> Flow-through <input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):		<input type="checkbox"/> Raceways <input checked="" type="checkbox"/> Incubation building <input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe):	
Where did water treated with this chemical go? (check all that apply):		<input checked="" type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin <input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input type="checkbox"/> Other (describe):	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Ovadine		Generic Name: Iodophor (10.7% iodine)	
Reason for use: Disinfection			
<input checked="" type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units): 4,682 mls (max)	Total quantity of formulated product used in past year (specify units): 162.6 liters	
Date(s) of treatment: August - December			Total number of treatments in past year: 52
Maximum daily volume of treated water: 625 liters	Treatment concentration (specify units): 75 and 100 ppm	Duration and frequency of treatment(s): One time for 30 minutes for eggs Solution for equipt. disinfection used all day	
Method of application:	<input checked="" type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input checked="" type="checkbox"/> Incubation building	<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin	<input checked="" type="checkbox"/> Other (describe): Spawning building
Where did water treated with this chemical go? (check all that apply):	<input checked="" type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works	<input checked="" type="checkbox"/> Other (describe): See note**
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: * Iodine in egg static bath is discharged at a minimum 1:1 ratio ** Vessels containing iodine are neutralized and discharged onto pavement or to settling basin.			

Brand Name: American Workman Salt		Generic Name: sodium chloride	
Reason for use: saline water for egg fertilization			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment: 3.5 kg (max)	Total quantity of formulated product used in past year (specify units): 46.7 kg	
Date(s) of treatment: 8/23 - 12/3			Total number of treatments in past year: 18
Maximum daily volume of treated water: 2,040 liters	Treatment concentration (specify units): 0.87 kg/95 liters water	Duration and frequency of treatment(s): Solution mixed and used for the day	
Method of application:	<input checked="" type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin	<input checked="" type="checkbox"/> Other (describe): spawning building
Where did water treated with this chemical go? (check all that apply):	<input type="checkbox"/> Discharged w/o treatment <input checked="" type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works	<input type="checkbox"/> Other (describe):
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Virkon Aquatic		Generic Name: Potassium peroxydisulfate	
Reason for use: Disinfectant			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units): 200 grams (max)	Total quantity of formulated product used in past year (specify units): 15 kg	
Date(s) of treatment: August to January			Total number of treatments in past year: 75
Maximum daily volume of treated water: 19 liters	Treatment concentration (specify units): 1% solution- 10.5 g/liter water	Duration and frequency of treatment(s): Footbath filled bi-weekly	
Method of application:			
<input checked="" type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through		<input type="checkbox"/> Medicated feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):			
<input type="checkbox"/> Raceways <input checked="" type="checkbox"/> Incubation building		<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe):	
Where did water treated with this chemical go? (check all that apply):			
<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin		<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input checked="" type="checkbox"/> Other (describe): See note	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: Discharged onto pavement away from drains and soil			

Brand Name:		Generic Name:	
Reason for use:			
<input type="checkbox"/> Preventative/Prophylactic <input type="checkbox"/> As-needed	Total quantity of formulated product per treatment:	Total quantity of formulated product used in past year (specify units):	
Date(s) of treatment:			Total number of treatments in past year:
Maximum daily volume of treated water:	Treatment concentration (specify units):	Duration and frequency of treatment(s):	
Method of application:			
<input type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through		<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):			
<input type="checkbox"/> Raceways <input type="checkbox"/> Incubation building		<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe):	
Where did water treated with this chemical go? (check all that apply):			
<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin		<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input type="checkbox"/> Other (describe):	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

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Aquaculture Drugs and Chemicals (cont'd)

Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include detailed records/calculations as an attachment to this Annual Report in order to demonstrate how the maximum effluent concentrations of solution and active ingredient were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.
- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

Static Bath Treatments		Ovadine (10.7%)
Tank Volume	889	Liters
Desired Static Bath Treatment Concentration	88,000	µg/L
Volume of Product Needed	15.63	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 0.0013 mg/L Active Ingredient: 0.0139 mg/L	Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	60,243,840 liters	Specify Units
Maximum % of Facility Discharge Treated	0.011	% of Total Discharge

Flow-Through Treatments		Parasite - S
Tank Volume Adult holding ponds	611,646	Liters
Calculated Flow Rate	13,862	Liters/Minute
Duration of Treatment	60	Minutes
Desired Flow-Through Treatment Concentration of Product	167,000	µg/L
Amount of Product to Add Initially	NA	Liters Product
Amount of Product to Add During Treatment	2,313	mL/Minute
Total Volume of Product Needed	138.8	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 1.7 mg/L Active Ingredient: 0.629 mg/L	Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	60,243,840 liters	Specify Units
Maximum % of Facility Discharge Treated	1.38	% of Total Discharge

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Aquaculture Drugs and Chemicals (cont'd)

Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include detailed records/calculations as an attachment to this Annual Report in order to demonstrate how the maximum effluent concentrations of solution and active ingredient were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.
- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

Static Bath Treatments		Ovadine (10.7%)
Tank Volume	889	Liters
Desired Static Bath Treatment Concentration	88,000	µg/L
Volume of Product Needed	15.63	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 0.0013 mg/L Active Ingredient: 0.0139 mg/L	Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	60,243,840 liters	Specify Units
Maximum % of Facility Discharge Treated	0.011	% of Total Discharge

Flow-Through Treatments		Parasite - S	
Tank Volume	Adult holding ponds	611,646	Liters
Calculate			liters/Minute
Duration			Minutes
Desired F Concentr			µg/L
Amount			liters Product
Amount			mL/Minute
Total Vol			liters Product
Maximum 1) Soluti			Specify Units
Minimum ed) Wat			Specify Units
Maximum			tal Discharge

For worst-case scenario with Parasite-S we did separate calculations even though those treatments occurred on the same day ("worst case"). Didn't know how to combine them into a summary.

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Aquaculture Drugs and Chemicals (cont'd)

Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include detailed records/calculations as an attachment to this Annual Report in order to demonstrate how the maximum effluent concentrations of solution and active ingredient were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.
- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

Static Bath Treatments		Ovadine (10.7%)
Tank Volume	889	Liters
Desired Static Bath Treatment Concentration	88,000	µg/L
Volume of Product Needed	15.63	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 0.0013 mg/L Active Ingredient: 0.0139 mg/L	Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	60,243,840 liters	Specify Units
Maximum % of Facility Discharge Treated	0.011	% of Total Discharge

Flow-Through Treatments		Parasite - S
Tank Volume Adult holding ponds	611,646	Liters
Calculated Flow Rate	13,862	Liters/Minute
Duration of Treatment	60	Minutes
Desired Flow-Through Treatment Concentration of Product	167,000	µg/L
Amount of Product to Add Initially	NA	Liters Product
Amount of Product to Add During Treatment	2,313	mL/Minute
Total Volume of Product Needed	138.8	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 1.7 mg/L Active Ingredient: 0.629 mg/L	Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	60,243,840 liters	Specify Units
Maximum % of Facility Discharge Treated	1.38	% of Total Discharge

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Aquaculture Drugs and Chemicals (cont'd)

Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include detailed records/calculations as an attachment to this Annual Report in order to demonstrate how the maximum effluent concentrations of solution and active ingredient were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.
- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

Static Bath Treatments	
Tank Volume	Liters
Desired Static Bath Treatment Concentration	µg/L
Volume of Product Needed	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: Active Ingredient: Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	Specify Units
Maximum % of Facility Discharge Treated	% of Total Discharge

Flow-Through Treatments		<u>Parasite - S</u>
Tank Volume	Nursery stacks	3263 Liters
Calculated Flow Rate		193 Liters/Minute
Duration of Treatment		15 Minutes
Desired Flow-Through Treatment Concentration of Product		167,000 µg/L
Amount of Product to Add Initially		NA Liters Product
Amount of Product to Add During Treatment		323 mL/Minute
Total Volume of Product Needed		4.85 Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 0.090 mg/L Active Ingredient: 0.0333 mg/L	Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	60,243,840 liters	Specify Units
Maximum % of Facility Discharge Treated	0.0048	% of Total Discharge

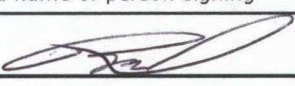
EPA General Permit WAG130000 - Annual Report

Changes to the Facility or Operations

Describe any changes to the facility or operations since the last annual report.

Signature and Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly evaluate and gather the information submitted. Based on my inquiry of the person or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Bob Turik	Hatchery Manager
Printed name of person signing	Title
	1/16/2019
Applicant Signature	Date Signed

Submittal Information

Send the complete, signed information, along with any attachments, to the following address:

U.S. EPA Region 10, OWW-191
Washington Hatchery Annual Report
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140